

**‘GHOSTS FROM THE MACHINE’:  
TECHNOLOGISATION OF THE UNCANNY IN H. G. WELLS  
Keith Williams**

In the strange manifestations of his early fiction, H. G. Wells often reworked occult themes in (quasi-)scientific terms. Simultaneously, Janet Oppenheim underscores a paradoxical convergence between the sub-atomic materiality of late Victorian science and the concept of an ‘other world, despite the decline in conventional religious belief:

The quest for a hidden pattern, a unifying framework, a fundamental theory, to bring together every diverse particle and force in the cosmos was intrinsically the same, whether one stressed the links between heat, electricity, magnetism, and light, or looked for connections between spirit, mind and matter.<sup>1</sup>

Theorisation and investigation of paranormal phenomena were particularly involved with the growth of new communications technologies, as other studies by Helen Sword, Jeffrey Sconce, Roger Luckhurst, Tim Armstrong and Marina Warner amply testify.<sup>2</sup> These included telegraphy, photography, film, radio and early experiments leading to television. Many were dependent on discoveries that became associated with psychics as much as physics, with the ethereal and the *ether*-real as it were, with both spectrality and the expanding electromagnetic spectrum. Frederic Myers, of the Society for Psychical Research (SPR), coined the term ‘telepathy’ for thought transmission in likely allusion to such ‘uncanny’ technological distanciations of human agency.<sup>3</sup> Elaborating the analogy,

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<sup>1</sup> Janet Oppenheim, *The Other World: Spiritualism and Psychical Research in England, 1850-1914* (Cambridge: Cambridge University Press, 1985), 396.

<sup>2</sup> See: Helen Sword, *Ghostwriting Modernism* (Ithaca: Cornell University Press, 2002), especially 35-6; Jeffrey Sconce, *Haunted Media: Electronic Presence from Telegraphy to Television* (Durham, N.C.: Duke University Press, 2000), especially 1-20; Roger Luckhurst, *The Invention of Telepathy, 1870-1901* (Oxford: Oxford University Press, 2002), especially 135-9; Tim Armstrong, *Modernism: a Cultural History* (Cambridge: Polity, 2005), 115-34; Marina Warner, *Phantasmagoria: Spirit Visions, Metaphors and Media into the Twenty-First Century* (Oxford: Oxford University Press, 2006), especially 237-49.

<sup>3</sup> For the circumstances, see Luckhurst, *Invention of Telepathy*, 70-1. As Luckhurst summarises, telepathy was the product of ambivalence towards a mediated modernity consisting of ‘spooky experiences of distance and relation, of traumatic severances and equally disturbing intimacies’ (276).

spiritualists came to regard the human body as a kind of psycho-electromagnetic receiver and/or transmitter.

The Martians of Wells's *The War of the Worlds* (1898) simultaneously employ televisual devices for spying on Earth and communicate telepathically. Similarly, modern media feature in Wells, often as not, as 'technology of the uncanny' (in Alison Chapman's terms).<sup>4</sup> Though not often discussed in this context, Wells's writing nonetheless reflects the strange liaison between spiritualism and science typified by the SPR, founded in 1882 by leading philosophers and scientists.<sup>5</sup> The SPR debunked countless fake mediums, but nonetheless pursued its grail of material evidence for paranormal phenomena, using advanced recording media.<sup>6</sup> As Hilary and Dik Evans note, their research suggested unlocking the mind's powers might outstrip the marvels of technology itself: 'Perhaps before the twentieth century was done with, telepathy would have rendered the telephone obsolete, while spirit travelling would have made the monorail and the sub-oceanic tube seem crude and cumbersome.'<sup>7</sup>

## Spectrums and Spectrality

In the wake of physicists such as James Clerk Maxwell (who laid the theoretical basis for broadcasting in the 1870s),<sup>8</sup> the atmosphere ceased to be a mere cocktail of breathable gases. It became a medium through which all kinds of wondrous

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<sup>4</sup> See her 'Mary Elizabeth Coleridge: Literary Influence and Technologies of the Uncanny', in *Victorian Gothic: Literary and Cultural Manifestations in the Nineteenth Century*, ed. Julian Wolfreys (Basingstoke: Macmillan, 2000), 109-28 (109-10).

<sup>5</sup> The SPR was founded at Cambridge by Henry Sidgwick, Frederic Myers, Edmund Gurney, Williams Barrett and others. Wells pre-imagined the social legacy of the 'practical' psychology and mesmerism of several prominent members, including Myers, William James and Gurney in 1899's *When the Sleeper Wakes* (London: Dent, 1994), 52

<sup>6</sup> The SPR's history was documented during Wells's lifetime in Harry Price, *Fifty Years of Psychical Research: a Critical Survey* (London: Longman's Green, 1939). Findings on 'Cinematography and Psychical Research' (especially evidence from *séances* caught on film) and on 'Broadcasting and the Occult' (including radio transmissions from 'haunted' houses and spiritualism and the BBC) are summarised on pages 236-9 and 263-74.

<sup>7</sup> *Beyond the Gaslight: Science in Popular Fiction 1895-1905*, ed. Hilary and Dik Evans (London: Frederick Muller, 1976), 10. Fusion between communications and psychics is exemplified by Fred C. Smale's 'The Abduction of Alexandra Seine' (1900). This turns 'telepathic instruments' affording global audio-visual linkage (see Evans, *Beyond the Gaslight*, 86-91, especially 87). Similarly, Frank Harris's 'A Charlatan' (1902) proposed 'Laws of nature and ideas in the mind suppose each other as eyes suppose light...Spiritual forces can be measured as easily as mechanical forces, and will be found more efficient.' However, the authenticity of the protagonist's telekinetic powers is left undecided (96-101, (97)).

<sup>8</sup> For Maxwell and ether, see Basil Mahon, *The Man who Changed Everything: the Life of James Clerk Maxwell* (Chichester: Wiley, 2003), especially 209-10.

radiation pulsed. On one hand, electromagnetism provided new explanations for phenomena such as light and colour; on the other, it uncovered forces hitherto only dreamt of in occult fantasies. A whole spectrum of invisible waves could pass through solid substances, carry information, and soon transmit voices or even moving images ‘wirelessly’. ‘Ether’ (Gk. *aither*, the heavens, from *aitho*, burn or shine) originally meant the clear, upper atmosphere, but came to signify the luminous otherworldliness of ‘ethereal’ manifestations; it then shifted to denote a medium assumed to fill space between particles of matter, carrying such electromagnetic ‘vibrations’, as they were known.<sup>9</sup>

The rise of scientific romance was intimately connected with both electromagnetic theory and paranormal phenomena. Victorian ambivalence about new discoveries and inventions stirred both profound desires and anxieties. One topical strand of the genre’s response was ‘transparency’: bodies became eerily diaphanous, revealing living organs or skeleton within, or even rendered invisible altogether. Consequently, ‘seeing and being seen’ were radically defamiliarised, turning subjects into superhuman voyeurs, but also exposing terrors of ubiquitous surveillance by invisible eyes, seeing at a distance or through solid walls into the most private spaces. The best known and most elaborated (stylistically and philosophically) is Wells’s *The Invisible Man* (1897), but it was neither first, nor last. I will briefly highlight the most symptomatic, in order to show how the novella’s references to electromagnetism typify how ambiguous absent-presence ceased to be a monopoly of occult narratives and traditional spectrality.

Wells modernised a theme rooted in myth and folklore from Plato’s regicidal Gyges’ magical ring, to the caps and cloaks of Celtic fairytale and medieval romance.<sup>10</sup> Invisibility fantasies based on supernatural causes were as common as ever in the early nineteenth century.<sup>11</sup> However, American Fitz-James O’Brien’s ‘What Was It?’ (1857) marks their mutation into quasi-scientific speculation. The story alludes to séances, but also the possibility of transparent beings. A nightmare creature, though eminently tangible, cannot be seen until a cast is taken.<sup>12</sup> Edward

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<sup>9</sup> Science and occultism intersected especially in the emerging field of nuclear physics.

Symptomatically, physicist and SPR member Oliver Lodge’s *The Ether of Space* (1908) treated it as both physical and psychical medium: Mark S. Morrison, *Modern Alchemy: Occultism and the Emergence of Atomic Theory* (Oxford: Oxford University Press, 2007), 80-1.

<sup>10</sup> For Gyges, see *The Republic of Plato*, trans. Francis MacDonald Cornford (London: Oxford University Press, 1941), 44-5.

<sup>11</sup> The most elaborate was James Dalton’s. Bernard Aubrey endures the pros and cons of transformation by a mysterious stranger, who materialises on cue to grant his sudden impulse to become unseeable: see *The Invisible Gentleman, by the Author of “Chartley the Fatalist”*, 3 vols (London: Edward Bull, 1833), I, 61-2.

<sup>12</sup> ‘What Was It?’ (1857), in *Fantastic Tales of Fitz-James O’Brien*, ed. Michael Hayes (London: Calder, 1977), 55-67 (64-5).

Page Mitchell's 'The Crystal Man' (1881) is perhaps the earliest in which transparency is *scientifically induced*. Its processes and themes may also have influenced Wells, including: bleaching bodily pigments (retina and red corpuscles); references to albinism; an ironic sense of supermanhood's drawbacks as well as advantages.<sup>13</sup>

Guy de Maupassant's 1887 short story 'Le Horla' marks the parallel shift in European spectrality. The protagonist is fascinated by instruments detecting microscopic creatures or evidence of possible life on other planets, wondering if they might reveal ethereal beings hitherto just as imperceptible?<sup>14</sup> 'Le Horla' draws on archetypes like incubuses, poltergeists and doubles, updating them into suggestions of superhuman evolutionary competitors, or extra-terrestrial colonists:

Ever since man began to think, he has had a premonition and a dread of some new being, stronger than he, his successor in this world, and that, feeling him nearby yet being unable to foresee the nature of this master, he has created, in his terror, the entire fantastic population of occult beings, vague phantoms born from fear.<sup>15</sup>

The tale also evidences unseeable forces such as electricity and 'animal magnetism'. Franz Anton Mesmer's theory of 'influence' anticipated electromagnetic radiation, but mesmerism's mysterious effects inevitably became associated with psychic phenomena. De Maupassant's narrator becomes convinced his antagonist is real after his cousin is mesmerised into visualising a photograph telepathically. He credits the Horla with similar powers of magnetising minds. The climax when he glimpses (or thinks he does) its paradoxically 'opaque transparency' is truly terrifying.<sup>16</sup>

James Payn's *The Eavesdropper* (1888) is arguably just as symptomatic of anxieties about audio-visual surveillance and invisible agency at the dawn of

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<sup>13</sup> 'The Crystal Man' (1881), in Edward Page Mitchell, *The Crystal Man*, ed. Sam Moskowitz (Garden City, NY: Doubleday, 1973), 1-15 (6-7).

<sup>14</sup> In Fitz-James O'Brien's 'The Diamond Lens' (1858), a microscopist, aided by both psychic and electronic mediums, becomes murderously obsessed by an siren from an infinitesimal world (in *The Fantastic Tales of Fitz-James O'Brien*, ed. Michael Hayes (London: Calder, 1977), 13-36). In Richard Adam Locke's 'The Telescopic Eye' (1876), a boy, previously thought blind, is able to visualise lunar geography and even describe a Martian city with astonishing clarity (discussed by Moskowitz in intro. to Mitchell, *The Crystal Man*, xlvii). Wells stories about displaced or tele-vision, particularly 'The Crystal Egg' and 'The Remarkable Case of Davidson's Eyes', have intriguing parallels with both.

<sup>15</sup> Guy de Maupassant, *The Horla*, trans. Charlotte Mandell (Hoboken, NJ: Melville House, 2005), 2-43 (31).

<sup>16</sup> *The Horla*, 39.

telecommunications: Bell's telephone and Edison's phonograph were patented just over a decade before, in 1876 and 1877 respectively. Payn also anticipates Wells and C. H. Hinton's speculations about 'effacing' the social self (see below). Ned Browne opens an ontological paradox: if not "'seeing ourselves as others see us" (for nobody *could* see me)', at least 'hearing myself spoken of as others heard'.<sup>17</sup> Payn also satirises scientific interest in spiritualist phenomena, alluding to real *Lancet* debates.<sup>18</sup>

Back in the USA, Ambrose Bierce's 'The Damned Thing' (1893) explained invisible monsters through 'actinic rays' beyond the visible spectrum: 'The human eye is an imperfect mechanism; its range is but a few octaves of the real "chromatic scale". I am not mad; there are colors which we cannot see...'<sup>19</sup> However, Wilhelm Konrad von Röntgen unleashed a genuine revolution in perception by discovering practical means for rendering bodies transparent in 1895. Allen W. Grove and P.D. Smith have shown how widely X-rays impacted on the Victorian imagination.<sup>20</sup> They furthered scientific 'anatomization' of visual reality and materialisation of normally unseeable phenomena made possible by rapid photography and film (the cinematograph was also invented in 1895). But attractions based on their ability to see through flesh and clothes (combining ghostliness and voyeurism), were initially more sensational than moving images and quickly incorporated into *séances* and popular fantasy. *The Quarterly Review* noted no discovery so electrifying the public imagination before.<sup>21</sup> Commentators particularly emphasised the role played in their discovery by the vacuum tube invented by eminent chemist and SPR president, William Crookes. X-rays seemed to bring proof of clairvoyance nearer with their disturbingly penetrative gaze.<sup>22</sup> Typically, William Stead, writing in the journal *Borderland*, responded to Röntgen

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<sup>17</sup> James Payn, *The Eavesdropper: An Unparalleled Experience* (London: Smith, Elder, 1888), 63.

<sup>18</sup> See Payn, *Eavesdropper*, 95-6.

<sup>19</sup> Ambrose Bierce, 'The Damned Thing' (1893), in *Complete Short Stories of Ambrose Bierce*, ed. Ernest Jerome Hopkins (Lincoln: University of Nebraska Press, 1970), 97-105 (105).

<sup>20</sup> See Allen W. Grove 'Röntgen's Ghosts: Photography, X-Rays and the Victorian Imagination', in *Literature and Medicine*, 16 (1997), 141-73; also P. D. Smith, *Doomsday Men: The Real Dr Strangelove and the Dream of the Superweapon* (London: Allen Lane, 2007), 40-51. As Grove notes in particular, *The Invisible Man*'s allusions to crime, spying and spectrality act out both the wonder and nightmare they created in Victorian culture. However, there remains much that cannot be accounted for without reference to the impact of other media, especially cinema and sound recording/transmission as we shall see.

<sup>21</sup> Anonymous, 'The Photography of the Invisible', *Quarterly Review*, 183 (1896), 496.

<sup>22</sup> Röntgen made his discovery by accidentally placing his hand between a Crookes Vacuum Tube emitting X-rays and a fluorescent surface in November 1895.

fever by stating that ‘the latest inventions and scientific discoveries make psychic phenomena thinkable.’<sup>23</sup>

X-rays also boosted the camera’s reputation as an uncanny medium, acquired through ‘spirit photography’.<sup>24</sup> *Pearson’s Magazine* simultaneously featured a grisly story and explanatory article on what became known as the new ‘photography of the invisible’.<sup>25</sup> Symptomatically, the story came first: George Griffith’s tale of ‘purely scientific’ revenge has overtones of Wells and Hinton’s methods, as well as their problematising of gendered and mediated gazes. It also parallels eroto-gothic ‘unclothings’ of bodies into skeletons in early trickfilms, such as Georges Méliès’s *L’Escamotage d’une dame chez Robert Houdin* (1896). Griffith’s celebrity jilt is duped into attending a ‘séance’ (French for photographic, as well as mediumistic session) by Professor Grantham, expert imager of ghostly doubles. Instead of the expected glamour portrait, he literally reveals her mortality: ‘her own skull – poised on the jagged vertebrae of her neck, and supported on the bare bones of her chest and shoulders, grinned at her through the transparent veil of flesh, and seemed to stare at her out of the sockets in which two ghostly eyes appeared to float.’ Shocked, she ‘vanished utterly from the gaze of her worshippers’ into a darkened asylum cell, convinced she was a living skeleton.<sup>26</sup>

The rationalisation of this new spectrality followed: ‘A Wizard of To-Day’, interviewing Röntgen himself, and illustrated by the famous photograph of a woman’s hand, a speck of glass embedded in its flesh (proof of X-rays’ diagnostic value). H. J. W. Dam’s article stressed ‘the world [...] will have to entirely revise its ideas with regard to the most familiar phenomenon within the scope of human consciousness – light.’ Boundaries between opaque and transparent, seen and unseen had been dismantled by ‘the last new mystery that human genius has summoned across the border between the known and the unknown.’<sup>27</sup> X-rays had a

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<sup>23</sup> Stead bolstered his point by arguing that the brain was ‘singularly like a central telephone exchange’, with memory acting like ‘a storage room of photograph and phonograph records’. (‘Suggestions from Science for Psychic Students: Useful Analogies from Recent Discoveries and Inventions’, *Borderland*, 3 (1896), 400.

<sup>24</sup> For a detailed history of spirit photography, see essays and examples in the catalogue to the recent international exhibition: Chéroux et al., *The Perfect Medium: Photography and the Occult* (New Haven: Yale University Press, 2005). Its boosting by X-rays is exemplified on pages 115-6.

<sup>25</sup> See, for example, ‘The New Photography’, *British Medical Journal*, 9:38 (1896), 289-90.

<sup>26</sup> George Griffith, ‘A Photograph of the Invisible’, *Pearson’s Magazine*, 1 (1896), 376-80 (380). Griffith also wrote a story about an attempt to hold the world to ransom by monopolising its electromagnetic forces, ‘A Corner in Lightning’ (1898) (in *Beyond the Gaslight*, 51-7).

<sup>27</sup> H. J. W. Dam, ‘A Wizard of Today’, *Pearson’s Magazine*, 1 (1896), 413-9 (414-5). Significantly, A.A.C. Swinton added X-rays to the roll of great media technologies such as telephony, photography, the phonograph and the possibility of wireless telegraphy, all of which involved potentially uncanny displacements of the subject (see ‘The New Photography

radically ‘othering’ effect on the relationship between viewer and spectrally-subtracted bodies, now more ‘undead’ than alive in the normal sense. Hence they are portrayed as more curse than blessing in C. H. T. Crossthwaite’s story about ‘Midas vision’. Herbert Newton invents drops sensitising eyes to X-rays and ‘other waves of ether yet unknown’, but watching his family as living anatomies is unbearable.<sup>28</sup>

X-rays seemed to validate the roster of scientised invisibility yarns. *Stella* (1895), about a transparent woman, by mathematician and spiritualist C. H. Hinton, was thus a particularly significant precedent for Wells. Stella’s mentor ‘found out how to alter the coefficient of refraction of the body’, by working ‘in the border land’ (a key SPR term) of science using spectroscopic technology.<sup>29</sup> (Wells’s invisibility process is also based on ‘optical density’ and lowering the ‘refractive index of a substance...to that of air’.)<sup>30</sup> He subtracts Stella’s ‘visible corporeality’ to dis/embody his social philosophy: prevention of egotistical reflection.<sup>31</sup> However, Hinton also satirises Victorian construction of ‘selfless’ feminine subjectivity. (Stella regains her self-image only after achieving financial and social equality, literally becoming a New Woman.) Wells’s anti-hero’s invisibility leads to diametrically different impulses: hyper-masculine egomania and proto-Fascist power politics. Nevertheless, in both texts changes in seeing and being seen break the limits of normal perception and morality.

There are other parallels which are spookily proto-cinematic, or invoke electromagnetic media. Stella’s absent presence, like Wells’s Griffin’s, is noticeable through objects and furniture subject to Poltergeistlike manipulation, then by her voice transmitting through space ‘radiophonically’. With special significance for shifts toward scientific speculation, Stella is exploited for effects at séances. Paradoxically, the fake medium is exposed by SPR investigation, but only by simultaneously verifying her even more fantastic ‘ether-reality’. Griffin’s superstitious landlady similarly assumes her furniture’s misbehaviour has the same cause as the ‘Tables and chairs leaping and dancing!’ reported at spiritualist gatherings (*Invisible Man*, 32). Both Hinton and Wells seem to parody experiments conducted by Crookes from the mid-1870s aiming to authenticate a telekinetic

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of the Invisible’, *Pall Mall*, 9:38 (1896), 264-8, especially 265-6. Wells published in both *Pall Mall Gazette* and *Budget* from 1894.)

<sup>28</sup> See Sir C. H. T. Crossthwaite, ‘Röntgen’s Curse’, *Longman’s Magazine*, 28 (1896), 469-84 (472). Newton’s ambivalent reactions to seeing his flesh rendered transparent also anticipate Griffin’s (476).

<sup>29</sup> C. H. Hinton, *Stella, Scientific Romances*, Second Series (London: Swan Sonnenschein, 1896), 35 and 17 respectively.

<sup>30</sup> Griffin describes his process in chapter 19: see H. G. Wells *The Invisible Man*, ed. Patrick Parrinder (London: Penguin, 2005), 88-93. Henceforth, all page references to *Invisible Man* will be given in brackets in the text.

<sup>31</sup> Hinton, *Stella*, 49.

‘psychic force’, as well as phantasmal ‘semi-transparent forms’, or Arthur Conan Doyle’s conversion after investigating a Dorchester Poltergeist in the early 1890s.<sup>32</sup>

Wells’s Kemp is irrationally spooked on first sensing Griffin’s proximity: ‘All men, however highly educated, retain some superstitious inklings. The feeling that is called “eerie” came upon him’ (78). However, after Griffin explains, Kemp acknowledges he has taken science beyond traditional supernaturalism: ‘This beats ghosts’ (80). It was achieved through discovering something beyond X-rays, with even more marvellous properties. Griffin stands between ‘radiating centres’ similar, but nonetheless different to those producing ‘Röntgen vibrations’ (95). Hence *The Invisible Man* is symptomatic of the problematisation of visibility and presence through the medium of ether. These remained key aspects of Wells’s exploration of media-decentred subjectivity as it developed.

*The Invisible Man* plays on the perception-altering aspects of electromagnetic technologies, but also their disturbing implications. In December 1896 – only six months before *Pearson’s Weekly* serialised *The Invisible Man* (12 June-7 August 1897) – *Pearson’s Magazine* featured ‘An Electric Eye’, by science columnist M. Griffith (another name echoing Wells’s protagonist’s). This invention monitored actual radiation beyond X-rays discovered by Jagadis Chunder Bose. Substances ‘opaque’ to X-rays were penetrable by Bose’s ‘electric waves, allowing even the refractive indices of lead or bone to be calculated. Thus to Griffith they could truly ‘see the invisible’, leading him to alarming speculations similar to the fantastic transformation of sight in Wells’s novella, the ‘tele-vision’ of his ‘The Remarkable Case of Davidson’s Eyes’ (1895) or the surveillance society based on electronic media of *When the Sleeper Wakes* (1899).<sup>33</sup> In future, such apparatuses might be ubiquitous: ‘Invisible eyes peeping at us from every corner, ready to note down our every action, for ever tracking us down like sleuth hounds. An end to peace, rest, privacy, and all that makes home sacred.’ Indeed the potential of Bose’s ‘Marvellous Discovery’, like Griffin’s, ‘Distances the Röntgen Rays as They Distance Photography’, the article headlined.<sup>34</sup>

P.D. Smith argues Griffin’s process is imaginable only in an age of such wonders, briefly making him ‘a living X-ray photograph, before vanishing

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<sup>32</sup> See Chéroux et al., *Perfect Medium*, 172 and 92, respectively.

<sup>33</sup> M. Griffith, ‘An Electric Eye’, *Pearson’s Magazine* (1896), 749-56 (754). For further discussion of the article’s likely influence on Wells, see my ‘Alien Gaze: Postcolonial Vision in *The War of the Worlds*’, in *H. G. Wells: Interdisciplinary Essays*, ed. Steven McLean (Newcastle: Cambridge Scholars Press, 2008), 49-73 (53-4).

<sup>34</sup> Griffith, ‘An Electric Eye’, 756 and 749, respectively. Conversely, Cavorite’s absolute ‘opacity’ to all ‘radiant energy’, including X-rays, radio waves and even gravity, provides interplanetary propulsion in Wells’s 1901 *The First Men in the Moon* (London: Penguin, 2005, 15).



altogether'.<sup>35</sup> It renders him transparent layer by layer, so he gazes at (and eventually through) his own eerie dematerialisation:

I shall never forget that dawn, and the strange horror of seeing that my hands had become as clouded glass, and watching them grow clearer and thinner as the day went by, until at last I could see the sickly disorder of my room through them, though I closed my transparent eyelids. My limbs became glassy, the bones and arteries faded, vanished and the little white nerves went last. I gritted my teeth and stayed there to the end. At last only the dead tips of the fingernails remained, pallid and white, and the brown stain of some acid upon my fingers. (*Invisible Man*, 99)

Moreover, the fact substances like undigested food and cigarette smoke can be seen moving through his system also seems to allude to X-ray films. Dr John MacIntyre first combined X-rays with moving pictures to demonstrate frog locomotion in April 1897.<sup>36</sup> Méliès skitted such demonstrations in *Les Rayons X* (1898): a man's skeleton escapes from the X-ray screen, its independent life terminated only by the apparatus blowing up, killing its creator.<sup>37</sup> Griffin's simultaneous re-materialisation and death is duly like a sensational X-ray anatomisation in reverse motion:

First came the little white nerves, a hazy grey sketch of a limb, and then the glassy bones and intricate arteries, then the flesh and skin, first a faint fogginess and then growing rapidly dense and opaque. Presently they could see his crushed chest and his shoulders, and the dim outline of his drawn and battered features. (*Invisible Man*, 148)<sup>38</sup>

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<sup>35</sup> Smith, *Doomsday Men*, 49.

<sup>36</sup> See *The Who's Who of Victorian Cinema: A Worldwide Survey*, ed. Stephen Herbert and Luke MacKernan (London: BFI, 1996), 87-8.

<sup>37</sup> G. A. Smith had already employed the theme in his 1897 comedy, in which another professor makes a startling revelation about a pair of lovers. American Wallace McCutcheon filmed *The X-Ray Mirror* in 1899.

<sup>38</sup> Wells described ectoplasmic manifestations in curiously similar terms: 'It becomes organised, in a few minutes, we are assured, as skin, muscle, nerve. It takes on the character of limbs, of heads, of entire quasi-human beings who move about.' ('Is Belief in a Spirit World Growing?' (1927), *The Way the World Is Going: Guesses and Forecasts for the Years Ahead* (London: Benn, 1928), 293-301 (297)).

Electromagnetism held sway over scientific romance long after. Jack London's 'The Shadow and the Flash' (1906) features deadly rivals with complementary processes. Lloyd Inwood devises 'perfect black', reflecting no light whatever. Though camouflaged in his new pigment, Inwood still casts a tell-tale shadow. Likewise, Paul Tichlorne achieves transparency through altering his molecular structure, but retains enough refractive density to produce chromatic aberrations.<sup>39</sup> Another American response was Harriet Prescott Spofford's 'The Ray of Displacement' (1903). Her 'Y-rays' 'polarise' the body's molecules so it slips through atomic interstices. Spofford's story also played on occult associations: her undetectable protagonist walks through walls, so 'no disembodied spirit had wider, freer range than I.'<sup>40</sup>

Other British scientific romancers also speculated about electronic presences transmitted through the ether. Owen Oliver's 'The Black Shadow' (also 1903), went beyond invisibility into sub-atomic life forms. Oliver fused radio with demonic bodysnatching themes, drawing on both electrical pioneer Nikola Tesla's belief he was receiving alien messages (also reflected in Wells's *First Men in the Moon*) and SPR pre-occupation with telecommunication's psychic potentials. Professor Flint strives to decode mysterious lunar signals.<sup>41</sup> However, his receiver accidentally teleports an ether-real being instead, existing as 'some kind of undulation or vibration', visible only as oxymoronic 'dark light'.<sup>42</sup> It attempts incarnation through the scientist's body, which is saved by fellow physicist, Karl von Kuren, who expels 'lunar soul' from human host and transmits it back into space. Wells's fiction is also distinctive for its prescience in exploring electronic presence, simultaneously reworking occult themes as quasi-scientific speculation about modern media, as we shall see.

## Fourth Dimensions

Wells reviewed Frank Podmore's SPR investigation of telepathy, *Apparitions and Thought Transference* (1894), criticising its evidential basis, because it was unverified by repeated experiment under controlled conditions.<sup>43</sup> The review

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<sup>39</sup> Jack London, 'The Shadow and the Flash' (1906), in *Science Fiction by the Rivals of H. G. Wells*, ed. Alan K. Russell (Secaucus, NJ: Castle Books, 1979), 365-75.

<sup>40</sup> Harriet Prescott Spofford, 'The Ray of Displacement' (1903), in *Science Fiction by Gaslight: A History and Anthology of Science Fiction in the Popular Magazines, 1891-1911*, ed. Sam Moskowitz (Westport, CN: Hyperion, 1971), 120-33 (121).

<sup>41</sup> Wells refers to Tesla's 'messages' from Mars (162).

<sup>42</sup> Owen Oliver, 'The Black Shadow' (1903), *Science Fiction by the Rivals of H. G. Wells*, 377-85 (380-1).

<sup>43</sup> See Frank Podmore, *Apparitions and Thought Transference: An Examination of the Evidence for Telepathy* (London: Walter Scott, 1894); Wells, 'Peculiarities of Psychical Research', *Nature*, 51 (6 Dec. 1894), 121-2. Wells was also concerned that 'the public mind' might be

sparked heated debate in *Nature*.<sup>44</sup> Nevertheless, as Kate Flint points out, many Wells narratives are not dissimilar to accounts of ‘ghost-seeing, or materialisation’.<sup>45</sup> Supernatural rhetoric overlapped even with texts seeking parabolic form for the most abstract concepts, such as four-dimensional geometry and other aspects of science’s emerging ‘multiverse’.

The parlour gathering of experts framing Wells’s first great scientific romance resembles an SPR séance.<sup>46</sup> *The Time Machine* (1895) is shot through with equivocations between advanced thinking and the occult. One key influence, Hinton’s ‘What Is the Fourth Dimension?’ (1884), explained apparitions by positing a world of multi-dimensional beings, who could intersect with and vanish from ours at will. Like many Victorians, Hinton saw no contradiction in using mathematical theory to conjecture about the paranormal.<sup>47</sup> Paul Coates calls ghosts (lingering from the past) ‘prototypical time travellers’.<sup>48</sup> Wells’s first published time travel narrative, ‘The Chronic Argonauts’ (1888) scientised the ghost story, creating a loop inverting cause and effect in endless uncanny replay. Moses Nebogipfel’s sudden apparition from the present (1887) precipitates a slaying in the past (1862), by which the house then becomes ‘haunted’ and derelict, awaiting the future moment when he moves in, invents his machine and travels back, etc.<sup>49</sup>

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‘incapable of suspended judgements’; that ‘it will not stop at telepathy’, but might infer the reality of ‘ghosts, witchcraft, miracles’ as an automatic entailment (122).

<sup>44</sup> Karl Pearson, of University College, London, broadly supported Wells, though pointing out flaws in his own conclusion about statistical probabilities in alleged instances of telepathic ‘card-drawing’: *Nature*, 51 (13 December, 1894), 153. Conversely, Cambridge’s Edmund T. Dixon defended SPR scientific credentials, insisting psychic phenomena were worth investigating, citing erstwhile disbelief about mesmerism (*Nature*, 51 (27 December, 1894), 200). Oliver Lodge parried Pearson’s riposte (*Nature*, 51 (10 January, 1895), 247), prompting Wells to deny he was stifling open-minded research, rather than drawing attention to ‘Question begging’ in Podmore’s book (*Nature*, 51 (17 January, 1895), 274). (Review and exchange are also reprinted in *H. G. Wells in Nature, 1893-1946: A Reception Reader*, ed. John S. Partington (Frankfurt: Lang, 2008), 47-57.

<sup>45</sup> Kate Flint, *The Victorians and the Visual Imagination* (Cambridge: Cambridge University Press, 2000), 283.

<sup>46</sup> See Marina Warner’s introduction to H. G. Wells, *The Time Machine*, ed Patrick Parrinder (London: Penguin, 2005), xx.

<sup>47</sup> See C. H. Hinton, ‘What Is the Fourth Dimension?’ (1884), in his *Scientific Romances* (London: Swan Sonnenschein, 1888), 3-32 (25). E.A. Hamilton Gordon’s April 1887 paper ‘The Fourth Dimension’ (delivered to Wells’s student debating society at the Normal School of Science) posited a similar explanation for spectral voices and manifestations: *The Time Machine: An Invention*, ed. Nicholas Ruddick (Peterborough, ON: Broadview, 2001), 219-20.

<sup>48</sup> Paul Coates ‘Chris Marker and the Cinema as Time Machine’, *Science Fiction Studies*, 14 (1987), 307-15, (308).

<sup>49</sup> See the reprint in *The Definitive Time Machine: A Critical Edition of H. G. Wells’s Scientific Romance*, ed. Harry M. Geduld (Bloomington: Indiana University Press, 1987), 135-52.

William Kingdom Clifford's study *Seeing and Thinking* (1879) called optical research 'a sort of Clapham Junction' for every Victorian science, but most importantly 'the subject of consciousness'. But it was also the point of radical instability in their rationalist epistemology. There, Kingdom Clifford cautioned, alluding to impulses giving rise to SPR methods, 'more trains of thought [...] go off the line' into the speculative or unprovable than at any other.<sup>50</sup> As *both* scientist and imaginative artist, Wells focused on this crux, only too aware of mediated vision's philosophical ambiguities and discursive tensions. Deliberate indeterminacy between rational or paranormal explanations for altered perception is widespread in his fiction. This is epitomised by 'Davidson's Eyes' (reworking Edgar Allen Poe's 1844 occult 'Tale of the Ragged Mountains').<sup>51</sup> Through an electromagnetic accident, Davidson loses sight of immediate reality, but is visually immersed instead in events unfolding simultaneously on 'Antipodes Island'. This resembles *The Invisible Man's* conceit, except the normal visual environment, not the subject, disappears: Davidson passes ghostlike through solid objects in his 'other' reality, but is totally disorientated in this one. The result is visual displacement to 'elsewhere' like cinema, though simultaneously transmitted like live TV, or even a form of virtual reality.

Other stories updated paranormal associations. 'The Crystal Egg' (1897) appears to be a Martian optical transmitter, through which their alien world is also visible as a moving, startlingly virtual picture. The viewer's name 'Cave' recalls Plato's allegory about consolatory illusion, Wells reshaping it for the telecommunications age, but the egg also appropriates the 'haunted object' topos of contemporary ghost stories.<sup>52</sup> Moreover, it alludes to crystal-gazing or 'scrying'. An influential rationalisation for crystal visions was advanced the same year: Edmund Parish's study concluded they reflected 'what is latent in the percipient's *subliminal* consciousness'.<sup>53</sup> 'The Crystal Egg' has much in common with this (Wells was already familiar with Podmore's parallel conclusion).<sup>54</sup> Nevertheless, he returned frequently to the crystal metaphor as a medium, like cinema or television, both defamiliarising this world and as a portal into other dimensions. As J. R.

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<sup>50</sup> William Kingdom Clifford, *Seeing and Thinking* (London: Macmillan, 1879), 33-4.

<sup>51</sup> For Poe's influence, see J. R. Hammond, *H. G. Wells and the Short Story* (Basingstoke: Macmillan, 1992), 90.

<sup>52</sup> See, for example, 'Canon Alberic's Scrap-Book' (1894) and 'The Malice of Inanimate Objects' (1898), a general meditation on possessed 'things', in M. R. James, *Casting the Runes and Other Ghost Stories* (Oxford: Oxford University Press, 1999), 1-13 and 286-92.

<sup>53</sup> Edmund Parish, *Hallucinations and Illusions: A Study of the Fallacies of Perception* (London: Walter Scott, 1897), 66-7.

<sup>54</sup> Podmore's *Apparitions and Thought Transference* considered 'Crystal Vision' in his chapter on 'Clairvoyance', 351-70 (357-9).

Hammond notes, access to such a device, occult and/or technological, ‘is never far from the surface of his fiction’.<sup>55</sup>

## Photographic Ghost Worlds

Before high-speed photography in the 1860s and 70s with electrically-operated shutters and more reactive plates, long exposures registered fidgety sitters or casual passers-by as semi-transparent blurs. At first accidentally (through re-using badly cleaned plates), then deliberately (through masking and double-exposure), diaphanous images were inserted into ‘spirit photographs’ alongside the living. This trend led ghostbusters such as Crookes, Conan Doyle and Podmore to seek to catch real manifestations on camera.<sup>56</sup> The contradictory impact on the popular imagination of science aided by photography stemmed from how they materialised what was invisible to the naked eye (as in the case of Eadweard Muybridge’s ‘animal locomotion studies’ or Étienne-Jules Marey’s ‘chronophotography’), but also the theory both lens and psychic medium registered ghostly ‘vibrations’ beyond the normal spectrum, epitomised by William Stead’s 1891 discussion of ‘The Astral Camera’.<sup>57</sup> The association was duly passed to film, parodied in Méliès’ *Le Portrait spirite* (1903), which ‘materialises’ a moving woman from a huge photo frame. In ‘The Inexperienced Ghost’ (1902), Wells’s gormless spook is semi-transparent like a superimposition, through which you can see its surroundings, perhaps recalling films like G. A. Smith’s 1897 *Photographing a Ghost*, which applied the Hove film-pioneer and SPR secretary’s patent double-exposure process to supernatural themes.<sup>58</sup>

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<sup>55</sup> Hammond, *Wells and the Short Story*, 25.

<sup>56</sup> Typified by Georgiana Houghton’s *Chronicles of the Photographs of Spiritual Beings and Phenomena Invisible to the Material Eye* (London: E.W. Allen, 1882). For SPR exposure of fake spirit photographs, but also resolute insistence that (in Michael Solovoy’s words from 1891) ‘rays of light which the human eye *cannot* see *can* be photographed, and that images invisible to the human eye can affect the sensitised plate’, see Grove, ‘Röntgen’s Ghosts’, 151-6; also Chéroux et al, *Perfect Medium*, 33-4, 92-3, 172-4 and 275. Wells discussed Gustave Geley’s photographic research at Paris’s Institut Metapsychique, apparently snapshotting spirits channelled through mediums’ bodies, in effects like superimposition, or other image manipulation. He also referred with open-minded scepticism to similar evidence of a ‘ghost world’ produced by Conan Doyle and Lodge. (See ‘Is Belief in a Spirit World Growing?’ (1927), *The Way the World Is Going*, 297-8).

<sup>57</sup> For the medium as ‘psychic camera’, see Arthur Conan Doyle, *Wanderings of a Spiritualist* (London: Hodder and Stoughton, 1921), 35-6.

<sup>58</sup> See *The Complete Short Stories of H. G. Wells*, ed. John Hammond (London: Phoenix, 2000), 467-476 (470). (Henceforth all page references to *Complete Short Stories* will be given in brackets in the text.) Smith was given prominent mention in Price’s *Fifty Years of Psychical Research* (168-9). Despite poking fun at SPR preoccupations in his films, he played a key role in convincing Gurney that telepathy was genuine. He was also involved in research for

This made cameras frequent props in neo-gothic fictions by Kipling, Verne and others.<sup>59</sup> Wells's own 'ghost worlds' are similarly marked by photography's oscillation between affirming or undermining perceived reality. Blasted into the 'Fourth Dimension', the protagonist of 'The Plattner Story' (1896) finds our world still visible only as a hazy phantasmagoria or double exposure. Conversely, his other universe (green tinged with red, like a tinted negative) becomes peripherally visible from ours solely by 'sitting for a long space in a photographer's darkroom at night' (*Complete Short Stories*, 101-15 (110)). 'The Stolen Body' (1898) features a similarly co-extensive parallel universe. Mr Bessel finds that like photography it lacks real depth or palpability, yet paradoxically defamiliarises ours so that 'all things on this earth are clearly visible both from without and from within' (*Complete Short Stories*, 512-24 (522)). The most private space becomes transparent, as though by X-rays. Conversely, the pineal gland, or 'third eye' of psychic tradition, is the sole organ through which this 'shadow of our world' is detectible, when glowing red like a darkroom light (522-3).

## Stolen Bodies

In allusion to early cinema, Bessel enters a colourless 'world without sound' (*Complete Short Stories*, 519). Its audiences found films an eerie experience, whether their subject was ostensibly paranormal or just simple actuality like the Lumières' 1895 *L'Entrée d'un train en gare*, precisely because they doubled the living world in spectral monochrome silence.<sup>60</sup> It seemed logical to some,

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*Phantasms of the Living* (see T. Hall, *The Strange Case of Edmund Gurney* (London: Duckworth, 1964), especially 4-5, 74-5, and note 65, below). Smith started a vogue for ghost films followed by others such as Walter Booth and Edison. For details, see Erik Barnouw *The Magician and the Cinema* (Oxford: Oxford University Press, 1981), 89; also Frank Gray, 'From Mesmerism to Moving Pictures in Natural Colours – the Life of G. Albert Smith', in *The Hove Pioneers and the Arrival of Cinema*, ed. Frank Gray (Brighton: University of Sussex, 1996), 27-33.

<sup>59</sup> In Kipling's 'My Own True Ghost Story' (1888) an old daguerreotype appears to furnish the conclusive proof the SPR quested for. In his 'At the End of the Passage' (1890) Hummil's eyes 'record' the horror frightening him to death. It just takes a Kodak to reveal it. See *The Complete Supernatural Stories of Rudyard Kipling*, ed. Peter Haining (London: Allen, 1987), 115-23 and 199-218. Similarly, in Jules Verne's *Les Frères Kip* (1902) a murderer's identity is revealed by the photograph's uncanny ability to capture fleeting or microscopic realities. Detectives enlarge a shot of a victim's pupil, on which his killer's form is imprinted. The process is shown in the illustration reproduced in *The Jules Verne Companion*, ed. Peter Haining (London: Souvenir, 1978), 93.

<sup>60</sup> Maxim Gorky's 1896 review of Moscow's first cinematograph show, 'Yesterday I was in the kingdom of shadows', famously associated it with eerie otherworldliness rather than ultra-realism for precisely this reason. Jay Leyda *Kino: A History of the Russian and Soviet Film* (London: Allen and Unwin, 1960), 407-9.

therefore, that film might finally settle dispute about the existence of the supernatural. Cinema seemed an artificial *re-animator par excellence*, the perfect machine for making ghosts. Similarly, Wells's precociousness about the implications of moving image reproduction fits with postmodern notions of cinema as a medium of illusory absent-presences. His early fiction is permeated by 'living pictures' and fascination with the principle of autokinesis on which cinema depends, but these issues are often imagined through updating notions of spectrality.

Like Wells fictions such as 'The Temptation of Harringay: The Story of a Picture' (1895), 'The Story of the Late Mr Elvesham' (1896), 'Mr Marshall's Doppelgänger' (1897), 'The Stolen Body', etc., the split, doubled or displaced subjects of early film reflected self-consciousness fascination with a medium in which images appeared to take on life of their own, at one or several removes from normal visual reality, or which 'snatched' likenesses from their owners. This culminated in *Der Student von Prag* (dir. Stellan Rye, 1913), although Méliès and others experimented with 'duplex' effects much earlier.<sup>61</sup> The SPR termed apparitional doubles 'reflex men', echoing duplication by image as with reflex camera.<sup>62</sup> Such doubling proliferated with each new media development. Indeed the prevalence of *Doppelgänger* themes in Wells and contemporaries suggests a wider anxiety within the cultural climate, not just about psychic duality, but about such virtual duplication, particularly intensified by the coming of film.

'Elvesham' uses quasi-filmic tropes to visualise psychic bodysnatching.<sup>63</sup> Elvesham's alien memories usurp his young victim's identity as 'phantasmal' superimpositions over familiar streets, like a magic lantern's 'dissolving views' in which one 'would begin like a faint ghost, and grow and oust another' (*Complete Short Stories*, 126-138 (131)). To Eden, Regent Street's Royal Polytechnic Institution seems a portal to elsewhere, enterable 'as one steps into a train' (132), Wells topically alluding to its reputation for exhibiting optical wonders including the London debut of the cinematograph itself on 20 February, 1896, only three

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<sup>61</sup> For example in *Illusions Fantasmagorique* (1898) a boxer splits into his own opponent for a match. *Le Portrait mystérieux* (1899) features a photographic double with a life of its own. In *L'Homme Orchestre* (1900) Méliès cloned himself into six different musicians for a moving visual pun on the traditional one-man band. For the earliest duplication, splitting and superimposing of images on screen, see Tom Gunning 'An Unseen Energy Swallows Space', in *Film Before Griffith*, ed. John R. Fell (Cambridge, MA: Harvard University Press, 1983), 355-6.

<sup>62</sup> For SPR research into visual doubling, see Marina Warner, *Fantastic Metamorphoses, Other Worlds: The Clarendon Lectures in English 2001* (Oxford: Oxford University Press, 2002), especially 201-2.

<sup>63</sup> Significantly Wells reworked 'Elvesham' as 'The New Faust', a film treatment for Alexander Korda. Though never produced, the script was published as a 'Film Story' in *Nash's Pall Mall* (December 1936), 120-45.

months before publication. Eden even thinks of reporting his experience to the SPR as evidence of ‘clairvoyance’. The story’s effect of being ‘in two places at once’ (132), or somehow split between them, would be visualised on screen by increasingly sophisticated techniques. Its speculations about ‘man’s detachability from matter’ (138) also play on the spectral effect of screen presences, especially alienating for early actors watching their recorded selves. Elvisham’s hijacking of bodies to create ‘serial’ eternal youth resembles film’s appropriation of likenesses for infinite reanimation, though mortal originals decay.

‘The Stolen Body’ deals with spiritualist belief in ‘emanation’ through a similar fantasy of an image taking life on its own, but is also another foreseeing of televisual transmission. Mr Bessel tests ‘the alleged possibility of projecting an apparition of oneself by force of will through space’ (*Complete Short Stories*, 512). Extensive SPR investigation of such phantasms of the living, ‘the best-attested examples being hallucinations representing the figure of the agent himself’, had been published in 1886.<sup>64</sup> G. A. Smith also ‘projected’ a girl’s living soul out of her body, then put it back, in his film *The Mesmerist*, released the same year as Wells’s story. However, Bessel’s vacated body is instantly snatched by another watching consciousness craving physical existence, leaving him stranded in an alien dimension. Wells’s most explicit exploration of electronic doubling was the televisual hijacking of Graham’s miraculously resurrected image and voice by the dictator Ostrog in *When the Sleeper Wakes*, for broadcasting as his regime’s benign persona.<sup>65</sup>

Wells adapted occult tropes for exploring mediated spectatorship psychological motivations. ‘Plattner’ foregrounds the issue of wish-fulfilment. His parallel universe, separated from reality by a screen-like membrane, is inhabited by ‘Watchers of the Living’, passively gawping at human dramas, consuming them like unending soap opera. Its ‘helpless disembodiments’, possibly spirits of the dead, are little more than heads with eyes, satirising audiences experiencing vicariously through figures on film (*Complete Short Stories*, 112). ‘The Stolen Body’ comments similarly on how moving images allow us to imagine ‘putting on’ other skins. Bessel finds himself immersed among other spectral watchers. His situation as he watches his hijacked body on its Hyde-like rampage is a nightmare of being lost amid a vast audience, driven hysterical by hero-worship and virtual thrills.

Wells was ahead of most in speculating about cinema’s potentials. ‘The Temptation of Harringay’ (1894) is a similarly cautionary fable featuring diabolic

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<sup>64</sup> See Edmund Gurney, Frederic Myers and Frank Podmore, *Phantasms of the Living*, 2 vols (London: Trubner, 1886). Cases comparable to ‘The Stolen Body’ are cited in I, 517, and II, 96-100.

<sup>65</sup> See Keith Williams, *H. G. Wells, Modernity and the Movies* (Liverpool: Liverpool University Press, 2007), 88-91.



seduction by the moving and talking picture an artist creates, but struggles to control. Though tongue in cheek, it witnesses the birth of a Frankenstein's monster, part machine, part spectre-making medium. Significantly, trickfilms like Walter R. Booth's *The Devil in the Studio* (1901) had parallel Faustian scenarios: Mephisto tempts an artist by making living likenesses appear instantly without labour or paint.<sup>66</sup>

### **'Sperrits into the Furniture'**

Early cinema's 'telekinetic' animism was the consummate visualisation of ancient superstition and wish-fulfilment.<sup>67</sup> Everyday objects, fantastically animated for poltergeistly or comic impact became staples in parallel with *The Invisible Man*. Wells's landlady screams, 'He's put the sperrits into the furniture' (32). Méliès' guest at *L'Auberge ensorcelée*, the same year, finds his discarded clothes rising against him, as if donned by some invisible presence. Anglo-American J. Stuart Blackton's *The Haunted Hotel* (1907) used single-frame exposure to move things around by 'unseen' agency, thus inspiring Frenchman Émile Cohl's stop-motion object animations for Pathé. Pathé eventually produced the earliest acknowledged silent homage to Wells's novella itself, *The Invisible Thief* (1909).<sup>68</sup> Precisely because grotesquely visualised metonymy is Wells's dominant trope, his text abounds with quasi-cinematic effects.

Traditional magic was surpassed by cinema's ability to conjure in ways rendering its technological legerdemain invisible in the trick itself. As Erik Barnouw's classic study demonstrates, widespread filming of conjuring acts was rapidly followed by development of editing trickery by professional magicians.<sup>69</sup> Such mechanisation of magic seems duly reflected in other Wells's stories, epitomised by 'The Man Who Could Work Miracles' (1898). Its title verb suggests operation of the marvellous by artificial means and film's status as a parallel visual reality outdoing traditional supernaturalism. 'The Magic Shop' (1903) was another playfully Mélièsque *tour de force* of trickfilm-like effects - dis/appearances, metamorphoses, 'portals' into other places, expanding and contracting dimensions, fairy creatures, animated objects, etc. As Wells acknowledged, on film fantastic

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<sup>66</sup> See Denis Gifford, *British Animated Films 1895-1985: A Filmography* (Jefferson, NC: McFarland, 1987), 6.

<sup>67</sup> As one of the earliest studies of film put it, 'Mankind in his childhood has always wanted his furniture to do such things... This yearning for personality in furniture begins to be worked upon in the so-called trick-scenes.' Vachel Lindsay, *The Art of the Moving Picture* (1915), rev. edn (1922; New York: Liveright, 1970), 60-1.

<sup>68</sup> For the late 1900s vogue for stop-motion invisibility films, see Williams, *H. G. Wells, Modernity and the Movies*, 56, 209.

<sup>69</sup> See Barnouw, *Magician and the Cinema*, especially 98.

impossibilities seemed ‘hyperreal’ in the most virtual way. As his shop assistant says, handing over a business-card, “‘Genuine,’...with his finger on the word...‘There is absolutely no deception, sir’” (*Complete Short Stories*, 429-37 (431)).<sup>70</sup>

The SPR may have sought to prove spirits genuinely manipulated furniture at séances by catching evidence on film, but arguably texts such as *The Invisible Man* also reflect a more demystifying approach to cinema’s ‘phantom objectivity’. According to Lucien Goldmann, filmic levelling between human subjects and inanimate objects corresponds to capitalist commodification.<sup>71</sup> Hence Marx’s fetishistic theory of the ‘spectral’ life of manufactured goods from *Das Kapital* (1867) has striking parallels with Wells. Marx argued real conditions of production - between people as makers and consumers - become ‘reified’ by ideology, taking on a fantastic appearance, as if the world were ruled by impersonal forces.<sup>72</sup> In technologising traditional ghosts and magic in quasi-cinematic ways, Wells seems to underline this reification process, in which manufactured objects (including film itself) appear autokinetic and the human agency behind them to vanish: his texts suggest the artifice behind media illusion.

## Disembodied Voices

Equally, *The Invisible Man* upsets what Jacques Derrida termed ‘phonocentric’ assumptions about speech as guarantee of authentic human self-presence, since Griffin becomes a ghostly disembodied voice: ‘It was the strangest thing in the world to hear that voice coming as if out of empty space’ (39).<sup>73</sup> Mediation of words by invisible transmission predated X-rays and cinema, as reflected by Payn and Hinton. Each new technological development foregrounded increasing

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<sup>70</sup> Wells first employed this phrase in ‘The Chronic Argonauts’ to ‘avouch’ time travel’s scientific reality against mere supernaturalism: “‘There is absolutely no deception, sir’, said Nebogipfel with the slightest trace of mockery in his voice. ‘I lay no claim to work in matters spiritual. It is a *bona fide* mechanical contrivance, a thing emphatically of this solid world...He rose from his knees stepped upon the mahogany platform, took a curiously curved lever in his hand and pulled it over. Cook rubbed his eyes. *There* certainly was no deception. The doctor and machine had vanished.’ (*Definitive Time Machine*, 147.) Wells was one of the first writers to become practically involved with filmic virtualism; appropriately, through the Time Machine ‘simulator’ patent, filed with British cinema pioneer Robert William Paul in October 1895 (*H. G. Wells, Modernity and the Movies*, 28-31).

<sup>71</sup> See Lucien Goldmann, *Towards a Sociology of the Novel*, trans. Alan Sheridan (London: Tavistock, 1975), 137-8.

<sup>72</sup> For further discussion of commodities and reification in *The Invisible Man*, see *H. G. Wells, Modernity and the Movies*, 63-4.

<sup>73</sup> In Derrida’s *Of Grammatology* (1977), ‘phonocentrism’ is the valorisation of speech, over the reproduction of language in writing and recording technologies, which underpins the Western philosophical tradition, to guarantee the ‘self-presence’ of the subject.

displacement of speaking subjects, to the point where language appeared to reproduce itself autonomously, as Sconce, Sword and Steve Connor historicise in detail.<sup>74</sup> Moreover, such transmissions accumulated uncanny associations paralleling moving images’.

Bram Stoker’s *Dracula* (published the same year as *The Invisible Man*) is equally symptomatic of this growing culture of disembodied speech, what Lucy Westenra, hearing the vampire’s summons, calls ‘distant voices which seemed so close to me’.<sup>75</sup> *Dracula* features diverse language machines: telegrams, typewriters, telephones and even a ‘phonographic diary’. There is a particularly intriguing parallelism between the undead’s materialisation from ‘earth boxes’ and reproduction of Dr Seward’s voice from wax cylinders. Kipling, who participated in 1898’s Royal Navy morse experiments, is usually credited with initiating haunted broadcasting, through ‘channelling’ the dead Keats in 1902: if radio waves penetrated spatial obstructions, why not time too?<sup>76</sup> But *The Invisible Man* already reflected weird distanciations of speaking subjects. The telegraph is prominent: Griffin cuts its wires in case this rival ‘voice’ warns about him (60).<sup>77</sup> Heinrich Rudolf Hertz discovered radio waves ten years before and Guglielmo Marconi’s first ‘wireless telegraphy’ experiments took place the year of its publication.<sup>78</sup> Hence technology progressed to virtually instant electronic ‘simulacra’ of speech without visible source. Moreover, from the patenting of Edison’s phonograph (1877), pioneers strove to create its visual counterpart to ‘reunite’ body and voice. Verne predicted this in his ‘ghost from the machine’ story, *Le Château des Carpathes* (1892), wherein a diva’s ghost is merely synchronised sound recording and projection.<sup>79</sup>

Obviously, Wells’s text could not be adequately realised before the soundtrack was perfected by Hollywood in 1927, despite lively silent versions such as Pathé’s. Effectively, it was a touchstone for this further technological quest. As Gilles Deleuze argues, this made James Whale’s 1933 adaptation a talkie masterpiece, because it actualised Wells’s foreshadowing of a crisis in language and subjectivity

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<sup>74</sup> See Sconce, *Haunted Media*, especially 1-20; Sword, *Ghostwriting Modernism*, 35-6; Steven Connor, *Dumbstruck: A Cultural History of Ventriloquism* (Oxford: Oxford University Press, 2000), especially 20-1.

<sup>75</sup> Bram Stoker, *Dracula* (Harmondsworth: Penguin, 1994), 164.

<sup>76</sup> See ‘Wireless’, *Complete Supernatural Stories of Rudyard Kipling*, 317-34.

<sup>77</sup> Telegraphy also features frequently in *Stella*, who also refers intriguingly to existing only as words (see Hinton, ‘Stella’, 104).

<sup>78</sup> *First Men in the Moon*, 15, refers to Marconi’s ongoing experiments (already successfully transmitted across the Channel by 1898).

<sup>79</sup> Edison’s audio-visual peepshow, the ‘Kinetophone’, was an early product of this drive. Auguste Baron produced experimental sound films as early as 1896. Ernst Ruhmer and Eugène Lauste were already experimenting with optical soundtracks by 1910.

through media displacement.<sup>80</sup> Whale's film at once depended on the soundtrack's enhanced naturalism and subverted it from within. More explicitly than the novella, speech is foregrounded to denote Griffin's weirdly simultaneous presence and absence. Paradoxically, it guaranteed the subject's vocal authenticity through lack of self-image, exploiting extreme *a*-synchronisation between dialogue and picture.

This also indicates the topicality behind Whale's expansion of Wells's embryonic critique of electronic media. Griffin is initially worried his power will be undermined by reporting: 'It's all about. It will be in the papers! Everybody will be looking for me; everyone on their guard - ' (62). However, he soon twigs publicity is a *symbiotic* asset, 'broadcasting' his reign of terror ahead of him - 'I heard a magnified account of my depredations, and other speculations as to my whereabouts' (113). Like a modern politician, he realises the media can be manipulated to spread his power in virtual form. By the 1930s, the media's pervasive ether-reality was more than fulfilling Wells's hunches about their potential for serving dubious ends. Whale's film deconstructs phantom personae transmitted on behalf of would-be political supermen such as Hitler and Mussolini. His Griffin enters Kemp's house just as he hears a newsflash about an 'Invisible Man'. The camera mimics Griffin's observation of Kemp in his 'most secret operations', watched 'by unsuspected eyes', following the terms of Wells's prediction about a surveillance future in 'Davidson' (see *Complete Short Stories*, 63-70, especially 70). With neat symmetry, Griffin switches the radio off, but continues its hair-raising effect by finishing the newsreader's sentence. Other newsflashes show him causing panic throughout society without needing to be physically present at all. Whale zooms in on a loudspeaker reporting his latest atrocity, expanding it into screen-filling close-up to foreground parallelism with Griffin's *own* voice and *its* disembodied origin. Two kinds of technological displacement, outdoing traditional ghostliness's potential to induce hysteria, symbolically converge. One was still imaginary; the other, only too actual by 1933, at the highpoint of broadcast propaganda and power politics.<sup>81</sup>

Whale demonstrated atavistic impulses still invested in modern electronic media, but was only picking up what was implicit in Wells's novella and elaborated in texts immediately following. *When the Sleeper Wakes*'s totalitarian future, 'haunted' by televisual eyes and virtual presences, watching or transmitted globally, systematises *The Invisible Man*'s mediumistic displacements of self-

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<sup>80</sup> Gilles Deleuze, *Cinema 2: The Time-Image*, trans. Hugh Tomlinson and Robert Galeta (London: Athlone, 1989), 233.

<sup>81</sup> An anonymous *Times* reviewer also noted frequent references to the power of telephonic and radio voices: "'The Invisible Man': A Film of Mr. H. G. Wells's Story", *Times*, 25 January 1934, 8.

image and speech. Hence Wells predicted how the potency of the ether-real would outdo past superstitions, projecting such developments forward into 2100.

## Conclusion

Wells re-invoked the ‘ghostland’, lying ‘squint’ to normal visual reality as late as 1937.<sup>82</sup> But there is scant evidence he was ever convinced the paranormal could be proven in material forms, aside from using them as parabolic tropes for exploring questions of technological mediation. ‘Mr Skelmersdale in Fairyland’ (1901), his modernised *A Midsummer Night’s Dream*, echoes innumerable trickfilms from Alice Guy-Blaché’s *La Fée aux choux* (1896) onwards, but Wells never staked his reputation on such phenomena, as Conan Doyle rashly did with the 1917 Cottingley photographs.<sup>83</sup> *The Autocracy of Mr Parham* (1930) summons a historical ‘Master Spirit’ which transforms into ‘Lord Paramount’, fascist dictator of Britain. However, Wells’s fable is lampooning the increasingly megalomaniacal *Zeitgeist*, rather than making propositions about reincarnation.<sup>84</sup>

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<sup>82</sup> H. G. Wells, *Star Begotten: A Biological Fantasia* (London: Chatto and Windus, 1937), 156.

<sup>83</sup> Arthur Conan Doyle insisted they were genuine in *The Coming of the Fairies* (London: Hodder and Stoughton, 1922). Wells had long been wary about photographic authenticity. His cousin, Isabel, whom he married in 1891, was a ‘retoucher’ by trade. One of his earliest essays refers to their ‘magically’ transformative art: ‘They are the fairies of photography and fill our albums with winsome changelings.’ ‘The Art of Being Photographed’, *Pall Mall Gazette*, 1 Dec. 1893, in *Select Conversations With an Uncle* (London: Lane, 1895), 23-32 (27-8).

<sup>84</sup> *The Autocracy of Mr Parham: His Remarkable Adventures in a Changing World* (London: Heinemann, 1930), 138-9, 143-4. Wells nevertheless kept abreast of psychic research conducted through media. In 1927, he considered ‘wireless telepathy’ experiments asking listeners to guess studio objects broadcast by thought alone. See ‘The Remarkable Vogue of Broadcasting: Will it Continue?’, in *The Way the World Is Going*, 168-78, especially 176-77. The quest for evidence on camera exercised similar fascination. Wells’s popular 1931 manual of biology closes with detailed (though characteristically inconclusive) accounts of ‘Borderland Science’ - including the latest photographs of levitating tables, ‘visitants’ and ectoplasmic forms. H. G. Wells, with Julian Huxley and G.P. Wells, *The Science of Life: A Summary of Contemporary Knowledge About Life and Its Possibilities*, 3 vols (London: Amalgamated Presses, 1931), III, 929, 931, 934 and 936. After Wells died, the spiritualist community seized the opportunity for ‘body-snatching’. He was ‘channelled’ by medium Elizabeth Hawley, conveniently ceding spiritualism the last word. The ‘re-entry’ of ‘my electronic body...into the world will immediately dispel belief in the finality of death and from the moment my foot touches the earth, the world moves ahead on an evolutionary scale.’ See Elizabeth Hawley and Columbia Rossi, *Bertie: The Life After Death of H. G. Wells* (London: New English Library, 1973, 7 and 280-1. Thus Wells was drafted into the venerable company of literati who have become ‘ghostwritten’, an apparently disembodied discourse himself, by-passing mere technological mediation: see Sword’s list in *Ghostwriting Modernism*, 42-3.

Nevertheless, his scientising of uncanny themes remains a remarkable lode of early speculation about the effects of moving image media, transmitted electronic presence, intelligence-gathering and sensory displacement. We are living through these more than ever now, in increasingly virtual, intrusive or immersing forms, though the concept of ether itself is long discredited.